

the **RaRa RAG**

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ROCHESTER AMATEUR RADIO ASSOCIATION, INC.

VOL. 57

OCTOBER 2004

NO.2

Prez Sez...

Brad Armstrong W1YX President

Get involved in emergency communications!

I know you have probably been hearing a lot about this in the amateur community lately. Did you know that there are many ways to serve in the emergency communications area? Even those with little or no operating experience can get involved. Participating in drills and public service events for practice, training with the Red Cross or Citizen Corps, getting on local traffic nets, practicing use of your equipment under blackout conditions, helping to plan and organize emergency responses, and the list goes on and on. Meetings have been going on throughout the year, but consider starting out this new season of amateur activities by getting out to the ARES meetings to find out how you can contribute. I guarantee

CONTINUED PREZ SEZ PAGE 2

Radio Coach Status – Schools Needed

Peter Fournia, W2SKY

RaRa Education Committee Chairman

The RaRa Radio Coach program is a highly successful hands-on resource for classrooms. During our 7 year history we have acquired over a dozen coaches who have interacted with students in educational demonstrations, conducted field trips, build projects and even talked to astronauts in space. We have been in at least 6 different area schools and addressed classes from 5th grade to 12th grade. Hundreds of students have been affected.

We focus on educational topics that are consistent with the classroom teacher's lesson plans. We use stimulating hands-on exercises and demonstrations that often make reference to communications technology. Coaches draw on their professional career experiences and on the topics mastered when acquiring an amateur radio license. The coaches have built up considerable experience and have acquired an array of demonstrations, props and lesson plans.

Our programs are highly varied. They have ranged from a simple 15 minute presentation to a 10 week 20 hour program. They are customized to match the teachers' needs.

Most of our experience is with the 6th grade classes at Thomas Jefferson Middle School. That program was terminated when the school transformed to a high school. We started an after hours high school radio club in September 2003 but it has been discontinued. The building of a wireless microphone kit was very successful but too expensive for RaRa to continue. Interest in HF communications was low although some IRLP QSO's worked out.

We found that our coaches are more comfortable with middle school level classes. Enthusiasm during demonstrations and discussions

CONTINUED SCHOOLS PAGE 3

RaRa

MEETING

October 1, 2004

7:30 PM

**HENRIETTA FIRE HALL
3129 E. HENRIETTA RD.**

Lasers for Amateur Radio

Communications

Presented

By

Andy Flowers KOSM

RaRa RAG 1

the RARA RAG

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ROCHESTER AMATEUR RADIO ASSOCIATION, INC.

P.O. Box 93333, Rochester, NY 14692-8333

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RARA RAG 2

CONTINUED FROM PREZ SEZ PAGE 1

you can put your interests and skills to use in the service of amateur emergency communications. Meetings are on the fourth Thursday of the Month in Monroe County, and you can find out more details at <http://www.monroecountymcomm.org>. Click on the Calendar link to see the often-updated schedule of meetings and other events.

Some of you reading this are not from Monroe County. Have you considered joining or reviving the ARES/RACES organization in your County? John Park, WA2SSJ, did so this past spring. He has been building new relationships in Ontario County with the WNY ARRL Section and County government there over the summer and he now has 25 registered members in Ontario County ARES/RACES. His success can be seen in his new organization's ability to cover the Alzheimer's Walk on September 12th in Canandaigua, NY. I have heard that this organization's activities have even given rise to discussions of reviving other amateur club activities in the area. Give him a call, congratulate him, and then ask him how you can do the same for your county. Soon folks will be calling you to find out how they can duplicate your success in your county as well!

The library book fund is off to a great start! The Treasurer has received \$100 total in donations to offset the purchase of the ARRL library set already donated by the Club to the Webster Public Library, part of the Monroe County Library System. If, as I believe we will, we collect enough contributions, then we will use it to purchase additional sets to be donated to other local libraries within the System. Bring your donations to the meeting or send them to the Club Treasurer, George Masny, KA2GPJ. If you mail them to RaRa's address, PO Box 93333, Rochester, NY 14692-8333, he'll be sure to receive them. Please clearly note that your contribution is for the library book fund if you send it to George. More information on the library sets can be found at <http://www.arrl.org/FandES/field/club/libbookset.html>. There was a great article on the front page of the September Rag regarding the donation to the Webster Public Library.

I am also going to continue efforts to bring the local clubs closer together. To that end, here is my invitation to any members of other

CONTINUED PREZ SEZ BOTTOM PAGE 3

has been higher with this grade level. Although advanced placement students are easier to work with, most of our experience has been with the mainstream student. We rely on the teacher to maintain discipline during the sessions; however, there were many classes where a relationship developed with the radio coaches. In these cases the coaches maintained a significant amount of class control.

We generally have 3 or more coaches at every session. A session is not a lecture or talk! It is an experience. Most sessions divide the class into 3 to 4 subgroups, each with a coach and operated simultaneously. The subgroups then rotate among coaches so multiple hands-on demonstrations are experienced.

The coaches may spend a significant amount of time and concentration planning, preparing and delivering a module. It is important that our coaches feel satisfied with the experience. Satisfaction comes from knowing that the students are enriched, and from the gratitude expressed by individual students and the teacher. We will not go ahead with a session unless we are prepared and confident that all participants will have a rewarding experience.

Here are some specific examples of hands-on demonstrations that we frequently delivered. We have props and lesson plans for each of them: static electricity, magnetism, batteries, resistors, ohms law, capacitance, circuits, block diagrams, satellites, Morse code, digital concepts, use of wireless, and more. With a little preparation we can turn these into 15 minute to 1 hour sessions.

Special language arts and geography knowledge is imparted during our on-the-air sessions. We love to participate in the February School Club Roundup when other students are on the air. Our format has been to sequence small groups through three modules. The first module orientates the student to the event and to radio communications including use of the phonetic alphabet. They then pass to 1 of 3 operating amateur radio stations for an on-the-air experience. Lastly, they move to a debriefing table with maps and a world globe to review what happened and how it occurred. We have received very

positive feedback from 6 Thomas Jefferson Middle School classes that were sequenced through this event in a 3 hour period. It took 6 radio coaches to operate the event.

The RaRa Radio Coach program is looking for client schools. We are asking for your help to find schools that would appreciate the hands-on experience that we offer. Your acquaintances, children and grandchildren may be your best contacts to locate school classrooms. Please talk to their teacher and share this information with them. Perhaps you will be asked to do a show-and-tell. We can help. Or, we can put on a program for the class. We may even arrange a special tour of a local industry such as Harris RF Communications, Microwave Data Systems or Xerox.

We have the people and props. You help us find the class rooms.

**RaRa
Amateur Radio
License Testing**
**All Elements Needed To Complete
a License Class**
Saturday October 15, 2004
Contact Cheryl Joyce AB2NU
For any special needs (585-533-9252)
Registration - 8:30 AM
Testing - 9:00 AM
Room 2150, Building 76
(Park in Lot F)
Rochester Institute of Technology
1 Lomb Memorial Drive
Rochester, NY 14623

CONTINUED FROM PREZ SEZ PAGE 2
clubs in Monroe and surrounding counties to attend our general membership meetings, or send announcements for this newsletter, and promote your club's meetings and activities. You will be welcomed.

RaRa HOTLINE
(585) 442-0587 24X7

Building the Sierra Norcal All-HF Band QRP Rig

Bill Hopkins, AA2YV

Low power ham enthusiasts, QRP-ers, have moved into the space formerly occupied by the "old timer" tinkerers and tube type rigbuilders. And they have a lot of help in the many small kit providers and gratis online schematic peddlers who just love what they do. Once you've built an HF one-band receiver or a CW transmitter – the easier of the two – and made it actually work, you will be, as they say, hooked. Every year at the Dayton Hamfest the QRP groups don't go out to restaurants of an evening; instead, they frequent the lobby of their specially reserved hotel for the famous equipment show 'n tell sessions. They even come from Europe to do this! So what's with QRP?

My experimenting Dad, the tinkerer *par excellence*, always said, "it's more blessed to build than to receive," and the apple didn't roll very far. So when I discovered I could build the Tuna Tin 2, a 40-meter transmitter from scratch, although one can get it as a cheap kit and use crude tools to do so, well, you know the rest. I built the Herring Aid 5 receiver – actually two of them – and then purchased a kit or two from Small Wonder Labs. But why not buy just the PC board and scrounge the parts?

I set my eye on a bigger project, where the process and the built-in frustration would be the real fun. Mind you, I don't deny having fun operating on the air. This 2004 Field Day, out in Oregon with my second-hand Heathkit HW8, I worked 41 states on 20 meters inside of 8 hours with a 22 gauge inverted V up at 20 feet. And at the home QTH I operate QRP like it was high power – nobody out there knows; they think it's just propagation.

The Big One? It's the Sierra Norcal All-HF Band transceiver that tunes 150 Khz, puts out 2 to 4 watts, and can be either purchased through Wilderness Radio (an updated version) or built from scratch out of the ARRL Handbook. (It's the forerunner of Elecraft K1 and K2.) I split the middle by using the FAR Circuits PC board and purchasing band module kits from Wilderness.

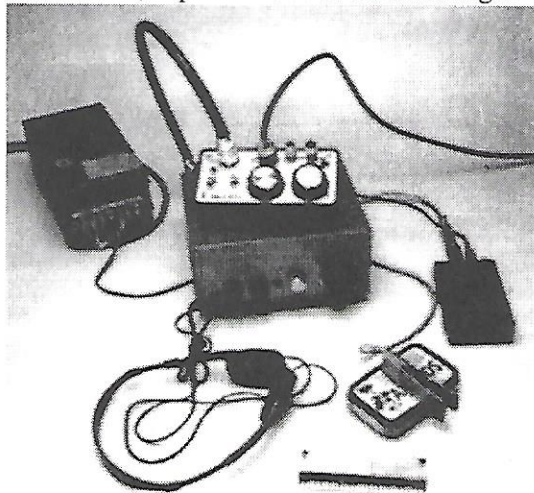
I know what you're going to ask: First, can I actually get the parts?; and, is it cheaper? The answers: yes (but you've got to be dili-

gent), and then no, to begin with. I suspect that kits, the complicated ones, are always cheaper than fledgling spare parts attempts. You get quicker gratification with kits and you don't have to become a troubleshooting junkie right off the bat. (Try Ten Tec or MFJ, etc.)

Except for the board, I built the Sierra from the ground up (great pun), including the enclosure box. Now it's built and sits next to the TS440-S, has a very hot receiver and brings in the DX QSO's like nothing (Wales, France, Cyprus, Washington, Texas, Bolivia, all in one evening).

Like I said, the process is the key, so I took a whole year to build and troubleshoot. Your undivided, focused attention when building from scratch is your big key. That means you will have only one or two mountains to climb when you troubleshoot and align the rig. But in the process you will learn more practical and theoretical stuff about RF than you could by passing the Extra Class exam twice. Along the way I sought the help of Sierra owners on line from Australia to California, from Ned Asam, W2NED, the local Elecraft whiz, and finally from George Platteter, AA2FO, for more RF wisdom and some machine shop enclosure-building skills.

What was my biggest troubleshooting trouble? A solder bridge, of course! Then I stupidly shorted out the 12 volt hot side and fried a couple of easily replaceable parts. But when I could not get a FAR Circuits band module-board to match the 25 pin buss and give me even 1 watt, I spent the \$35 bucks and bought



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CONTINUED FROM SIERRA PAGE 4
one from Wilderness. The 6 page Handbook photocopy served me well most of the time, and I referred to online ARRL info for alignment.

Now, following online advice, I've replaced the original 2N3553 power amp transistor with the MRF237, and my power has jumped from 1.5 to 3.5 watts on 40 and 20. My enhancement jobs are to build 17, 15, 12 and 10 band modules and to install an S-meter/power meter, hopefully from an old Yaesu FT101.

To operate, I use either an adjustable power supply or a battery, the little MZ2 tuner, a Tick Keyer, my homebrew key paddle (Altoids box) and any antenna I can get my hands on. Well yes, it was a trifle more expensive than the kit route, but now I have almost enough parts to build a second Sierra. Do you think I should order the Elecraft K1 just for fun?

RaRa Rag 20 Years Ago, October 1984

Ed Gable K2MP

The featured program this month was on Army MARS, the Military Affiliate Radio System. The presenters were Jason Layton, K2BYL, the state MARS director, and Tony LaJoie, WA2SJI, the area 4 (WNY) coordinator. Jason and Tony reported on the history of MARS, their mission and importance to servicemen and women everywhere. As was the custom, following the meeting there was coffee and doughnuts served by refreshment chairman George Muller, WA2IEO.

The RRRRA announced the start of a fund drive to purchase a sophisticated controller and autopatch for the 28/88 repeater. Heading the drive was RRRRA's technical director, Ron Jakubowski, K2RJ. The two-thousand dollar investment was a big step but brought the first real full featured repeater to the Rochester area. Writing for RACES, Ed Holdsworth, N2EH, announced the 1984 Simulated Emergency Test. This S.E.T. was planned by the county's Office of Emergency Preparedness staff, including Steve Gulack, N2DZS. If not busy enough, Ed, N2EH, also wrote announcing the start of the licensing classes as well as the availability of the new Club jackets. A rare appearance of the Rochester DX Association in these pages was penned by Fred Gern,

KB2SE. Fred wrote concerning the problem of working rare DX due to the proliferation of duplicate contacts by big gun DX stations. He cited figures that 22% of calls in the ultra rare Heard Island, VK0CW, log were duplicates. Tom Richmond, WB2IEY, for the Rochester VHF Group, reported that new beacons were now on-the-air on 50.071 and 144.051 MHz. The FCC announced that their FCC monitoring station in Canandaigua will be reactivated after being QRT for five years. Jim Taylor, KC2U, the district engineer from Buffalo, reports that the big change is that now the station is completed automated and run by a computer data network. Sadly, John L. Pogue, W2QYT, was reported as a silent key. A new advertiser was Huether Communications of 428 Ames Street in Rochester, selling and servicing two-way radios and amateur equipment and parts. From the Want Ads you could buy a complete Drake 7 line and tower, for \$2,000, from Jane Nixon, KA2EFL.

NASA's Satellite Tracking Website - or - Find Out What Your Tax Dollars are Doing!

Don Dunn AB2NM

Several weeks ago, a local ham - whose name and call escape me at this moment - called upon the collective wisdom of the Newbie Net - which airs weekly, following the Monroe County FM Net - to aid in resolving his quandary. Seems the fellow was interested in tracking amateur radio satellites. While he had a PC and internet access, he did not have tracking software. Furthermore, he did not want to acquire software, and deal with entering Kepplarian numbers, and so on.

About a year ago, I was in the same boat. So, jumping in [The Newbie Net] with both feet, I offered the following. I directed the fellow to the NASA website at www.nasa.gov. Once there, search the site for the phrase "J-Pass". Why J-Pass? Don't know which for sure. Has nothing to do with Jennifer Lopez, far as I can tell ... but alas, I digress. The first document that you will encounter will bring you to the following site: <http://science.nasa.gov/> - which is really where I should've sent him initially,

CONTINUED NASA PAGE 6

CONTINUED FROM NASA PAGE 5
had I remembered.

To the left of the main page, you'll see in bold type **Satellite Tracking**. Click on that link. Buckle up; this is where the fun starts. [<http://science.nasa.gov/Realtime/>] NASA has a bunch of amazing tracking options. I will point out a few here, but these descriptions do not do them justice. You really owe it to yourself to check these out!

First, there's **Live 2D Java Tracking Maps** says the site, "J-Track 2.5 is a great way to locate the Space Station, Hubble Space Telescope, Chandra X-Ray Observatory or any of your favorite satellites. We even add the Space Shuttle (during missions). This tracker is also used by our remote scientists to keep up with the mission." Follow the links to track specific craft such as the International Space Station (ISS), or the Hubble Telescope. Or, you can select other links specifically for Weather Satellites or Search and Rescue Satellites. Finally, there is a link specifically for our beloved Amateur (HAM) Satellites. Hey, did you notice that this map has an incredibly useful gray line indicator on it?

Another choice is NASA's **live 3D Java Tracking Display** regarding this link, NASA states, "Did you know there are over eight thousand artificial objects orbiting Earth? Over 2,500 are satellites, operative and inoperative. The remaining objects are orbital debris: parts such as nosecone shrouds, lens, hatch covers, rocket bodies, payloads that have disintegrated or exploded, and even objects that 'escape' from manned spacecraft during operations.

"J-Track 3D is one of the most popular Java applets on our web site. It shows 700 satellites, out of thousands, swarming about our earth. You can rotate the display and modify all kinds of settings. The display will also zoom in and out." This one is a lot of fun! I won't spoil the surprise for you; check this out. If you have a young ham, potential ham, harmonic, grand-harmonic, or any other youth who can be invited, persuaded, shanghaied, or co-opted to join you, even better.

Now to the real point of the gentleman's request: he wanted a way to predict amateur radio satellite passes. Yep, NASA has that one covered, too. Check the section entitled **Predictions for Viewing Satellites** about these links, NASA writes, "Going to be outside to-night? Check J-Pass tries to demystify satellite

tracking. We have packed all of the 'Rocket Science' we can into this little 50KB Java applet to calculate when you can see one of many satellites which appear bright in the night sky.

J-Pass 2.5 (beta) is the simplest. Just type in your U.S. Zip Code and click Go. J-Pass 2.0 is the current version, though not the easiest. J-Pass E-mail Generator Generates e-mail messages of when and where to look" I use the emailed reports. They are terrific! Once or twice a week, I receive an email listing ISS passes over Webster. The report looks three or four days into the future, and lists all passes - day or night. Additionally, the report details the time and in which direction the ISS will rise, when and where it will set, how long it will be overhead, and its direction of travel. Now, my selection is only for the ISS, but there's an extensive list of satellites to choose from. If memory serves - and that's always dangerous for me - you can include up to 10 satellites in one report, to one email address. A folk, all of this is **FREE!** (One of a ham's favorite words. Others include, "Yes, dear, you can buy that rig. You deserve it!" But only if all those words are connected, in that order, without amendment.) Okay, last one.

Live 3D Tracking Snapshots NASA offers the following description:"These very popular snap-shot picture update every minute. For those without Java in their web browsers or on systems without Java, these are for a great way to follow along with the tracking of satellites. We can create images for the following satellites:

Int'l Space Station

Shuttle

Hubble Space Telescope

Chandra X-Ray Observatory

NOAA 12, NOAA 14, NOAA 15

There you have it, guys and gals. Our collective tax dollars at work! In corporate America, that's called ROI, or "Return on Investment". Lots of times, I'm less than enthused about the taxes I pay, but work like this - from NASA - does seem to take the edge off, just a bit. I hope that you enjoyed our little tour. 73 until next time!



LETTER TO THE EDITOR

Allan Pellnat KX2H

[I am writing] regarding the short item in the most recent RaRa Rag about Ed Gable's two awards. It may seem to be a minor point but you use the word "National" in your headline and in the article text with regard to Ed's awards. These awards have international significance. The AWA is a global organization with over 3000 members on every continent except Antarctica. The Houck award is given in the name of and was originally endowed by Harry Houck, Maj. E. Howard Armstrong's chief assistant and co-holder of many fundamental electronic patents. The Houck award is given annually by a select committee of the AWA.

The Taylor award is not given on an annual basis but only in recognition of significant achievements in the television field. It too is sponsored by an international body and the presence of the members of the Baird family at the presentation would compare to having had Hiram Percy Maxim present for an award presentation.

Ed Gable is truly an upstate New York treasure and the most dedicated radio historian that I know. He truly deserves both awards and the RaRa membership should be appraised of their international significance in the next Rag.

[Editor's note: The article to which Mr. Pellnat refers was indeed written by the award recipient Ed Gable. The Rag editorial staff thanks Allan for not allowing Ed to be so modest about his accomplishment.]

TIME-COMPRESSED SCANNING

Donald Dunn AB2NM

One of the greatest things about VCRs is the flexibility they permit: record your program, watch it when you want to, and blast through all those annoying commercials. Wouldn't it be great if we could do the same thing with our radios? We can, and here's how.

WHAT YOU'LL NEED:

HT or Scanner, Cassette recorder with voice activation (VOX)

180-minute cassette tape (90 min. / side),

Patch cord headphones or ear phone (optional)
Wall-plug power supplies for cassette and radio (optional, but recommended)

WHAT TO DO:

Simply connect the output (earphone) of your radio to the MIC input of the cassette recorder. Most common jack sizes accept 1/8" mono plugs - but check your owner's manuals just to be sure. Other sizes are in use, and sometimes it is difficult to determine the exact size by looking.

Once you have connected the radio to the recorder, some adjustments must be made. These will be easier if you have an inexpensive set of headphones handy. Connect the headphones to the recorder's EAR jack. Turn the radio on, and set the radio's Squelch control to a normal level, and the radio's Volume to just below normal. Pause the recorder, and set the recorder to Record (PLAY + REC). Doing so will allow the audio from the radio to pass through the cassette recording head and into any recorder amplification circuitry, but not run the tape. You'll need an active frequency to monitor. If nothing is active, try NOAA on 162.4 MHz. 'Unpause' the recorder and set the radio Volume and the cassette VOX adjustment so that the recorder will begin to record on a signal from the radio. Also check that the cassette stops when no signal is present. Use the headphones to monitor the volume and start/stop audio levels. Also, ensure that the audio from the radio is not being distorted by the cassette's amplifier circuitry. [You'll have to 'unpause' the recorder for these last steps, and watch the recorder start and stop. You may also have to jump from the NOAA channel to an inactive frequency to test the operation.]

These steps may take a few minutes of trial and error, and a few adjustments of the volume and VOX setting. What you will be rewarded with is perhaps 8 hours of traffic reduced to one 90-minute side of a cassette. All of the boring 'dead air' has been eliminated by the VOX circuit! I regularly pop the cassette into the car's cassette player and 'listen in' to the previous evening's traffic while driving into work the next morning. This works remarkably well for a single channel, and recording up to three channels is possible without too much confusion. After about three frequencies, it can become challenging to follow one

CONTUNUED TIME PAGE 8

particular set of events, and you risk losing traffic when transmissions occur simultaneously on different channels. Your recorder will obviously capture traffic chronologically - but unless someone includes a time in their transmission, you will not know if that MVA occurred at 0135 or 0417. You will only know that it happened after the fire, and before the train derailment. Get my drift?

The addition of a time delay switch - the kind that automatically turns your lights on and off when you are on vacation - can add yet another level of flexibility to this little set-up. Turn the radio and recorder on for your favorite net, and turn it off afterwards. I'd recommend using the wall-plug power cubes instead of batteries because you know that batteries are one of Murphy's favorite tools! Invariably either the radio batteries or the recorder batteries will fail at the most inconvenient moment.

POSSIBLE USES:

Repeater owners and trustees - listen to your repeater traffic during off-hours, Monitor you local Police / Fire / EMS activities overnight [especially if you are a Chief, or staff officer] Does your company use radios on site? Find out what broke overnight on the backshift [fast-track your career] Catch the ARRL Newsline / Hill-Top News Report / Monroe County FM Net / Newbie Net when you cannot otherwise participate Listen to NTS traffic nets and practice copying traffic

It is truly amazing what can be captured in the wee hours, when people mistakenly that think no one is listening! One of my seasonal favorites is monitoring snow-plow drivers during the overnight shift, especially if there was heavy snowfall overnight. Remember that certain types of radio traffic are currently illegal to monitor, let alone record. Please act responsibly, and in full compliance with local, state and federal laws.

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RARA RAG 8

Rochester Amateur Packet Society

Packet is alive and - well... Hiding... The level of packet activity has picked up a bit since the Hamfest, but there are still lots of room for playing around the nodes. Nodes? What's that? If you'd like to learn about packet radio, come to our meeting with your questions and there will always be someone to help you navigate through the packet system and show you how to connect that GIZMO to your radio and computer... You don't need to be a member to visit our meetings, and if you decide to join, membership in RAPS is open to anyone in the amateur radio community who has an interest in packet radio. Experienced packeteers, as well as newcomers, are welcome to join.

We meet on the **2nd Thursday** of each month from September through May, at 7:30 P.M. in Room 76-2150, Bldg. #76 RIT Campus, off Jefferson Rd. Go to <http://facilities.rit.edu/index.asp?page=map.asp> for campus map.

RAPS Club Call sign: KB2WYA

RAPS on the Internet: www.ggw.org/raps

Next Meeting Date:

Thursday, October 14, 2004

Program: To be announced

Future Meeting Dates:

November 11, 2004

December 9, 2004

January 14, 2005

NEXT RAG DEADLINE 10/18/2004

Need A Lawyer?

call

Snyder and Snyder, Attorneys
Sherwood M. Snyder W2KFU
Paul I. Snyder

Dependable Advice

No Charge for Consultation

183 E. Main St. ● Suite 1024 ● 546-7258

PUBLIC SERVICE REQUESTS

Keith Freeberg N2BEL

Calling all amateurs! We need your help. We have lots of fun public service requests from Rochester community non-profits still to go. The public, thanks to our PR team, is increasingly aware of what amateur radio can do. See mentions of RaRa on TV 8, 10 & 13's respective web sites.

Now, more than ever before, is the time to consider volunteering a few hours to help your friends and neighbors. Learn new skills, dust off your existing skills and be ready to handle emergencies. All you need to do is volunteer and we will do the rest to help you.

These events will leverage as many modes of amateur radio as is fitting the type of event and will be a great way to keep your emergency communications skills sharp. Here are just a few of the events yet this Fall; Walk for Diabetes - October 2 -- Ellison Park half day.

October 13 -- R.E. Ginna Nuclear Evacuation Pre-Exercise (now Constellation owned)

Pumpkin Patrol -- October 30 & 31

November 9 -- R.E. Ginna Nuclear Evacuation Exercise/Demonstration for agencies (now Constellation owned)

New Event Coming Next Year:

8th Annual Bike Ride across New York via the Erie Canal trail please check our website

RochesterHam.org for descriptions and links.

Information will be updated every two weeks.

Questions? Please call or email me.

N2bel@frontiernet.net or 585-254-0722

SILENT KEYS:

Caryl E. Eckert KB2CIB

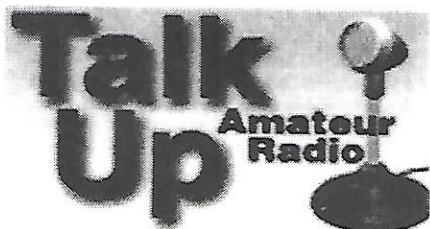
(First name spelled wrong last month)

West Bloomfield, NY May 15, 2004

Don Venti, KB2YCL September 2, 2004

Dennis J. Norton W2DJN (ex-KC2GSC)

Spencerport, NY September. 13, 2004



Rochester Radio Repeater

Association Meeting

Friday, October 15 - 8:00 PM

Pittsford Town Hall Basement meeting room
(parking in rear of building)

Main Street, Rt. 96 in Pittsford

Need A Lawyer?

You've seen his add in this rag for many years. Attorney Sherwood Snyder, W2KFU, will be the guest speaker at the next RRRA meeting. Please join us for what promises to be an interesting and enlightening presentation on The Law and You: Wills and Estates.

KODAK A.R.C VE TESTING (W5YI VEC)

Ray Pickens WA2MYG (Contact Person)

As of this writing the Kodak VE testing team will be operating on a new schedule every 4 months, the next session will be on November 4, 2004 17:30 Building 28 (Theater on the Ridge) at Kodak Park. Park in the lot next to the building at the barrier press the HELP Button & tell the guard you are here for the Radio exam & he will rise the barrier

If there is a need for a group of Applicants such as a class or club To have a special VE session Please notify me wa2myg@arrl.net or By phone (585)334-8724 And I will make every effort to arrange it.

JOTA FREQUENCIES

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40 m	7.270 MHz.(New for '04)	7.030 MHz.
20 m	14.290 MHz	14.070 MHz.*
17 m	18.140 MHz.	18.080 MHz.
15 m	21.360 MHz.	21.140 MHz.
12 m	24.960 MHz.	24.910 MHz
10 m	28.390 MHz.	28.190 MHz.

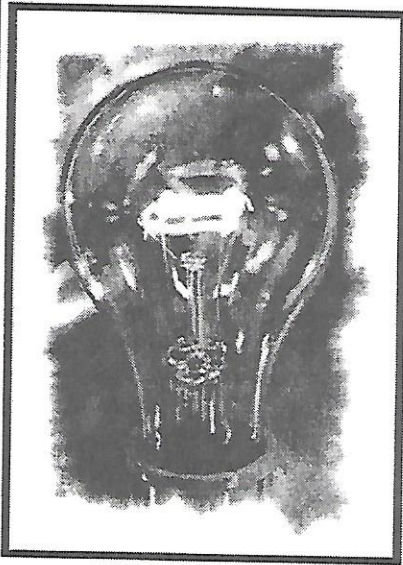
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LET US HELP YOU PATENT YOUR INVENTION

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Howard J. Greenwald, AB2HD, Patent Attorney
John M. Hammond, P.E., Patent Agent, Chemical Engineer
Peter J. Mikesell, Ph.D., Patent Agent, Chemist
Robert D. Gunderman, P.E., Electrical Engineer

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